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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,801	09/04/2003	Manish Pandey	CA7038422001	7106

23639 7590 12/12/2006  
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EXAMINER

DO, THUAN V

ART UNIT PAPER NUMBER

2825

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/656,801	PANDEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuan Do	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20 and 63-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 63-70 is/are allowed.
- 6) ☒ Claim(s) 1- 3, 20 is/are rejected.
- 7) ☒ Claim(s) 4-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This non final office action is responsive to elected restriction dated on 09/29/2006 and amendment dated 06/16/2006. Claims 1-18,20,63-70 are pending in this office action. Claims 19, 21-62 have been canceled.

Thanks to the applicant's interview on 12/04/2006 without any result. The remarks have been considered but not persuasive. The new search found the prior art of Martin et al., pat no. 6931611 that also discloses the feature of persistent caches which is standing for an adaptor containing information from previous equivalency check as defined in the application abstract. Therefor, the following rejection is made.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 3, 20 are rejected under 35 U.S.C. 102(e) as being unpatentable over the prior art of Martin et al. Pat. No. 6931611.

**Regarding claim 1:** The prior art teaches a method comprising:  
solving at least a first equivalence checking problem (col. 1, lines 31-43);  
storing at least a first solution to at least the first equivalence checking problem (col. 1, lines 31-43 using the modeling output as a storage of solutions. This area is also used to reject the feature of claim 20) ; and

reusing at least part of the first solution to the first equivalence checking problem for a second equivalence checking problem (col. 2, lines 7-21 using the reference model as reusing the solutions including the first solution),

wherein the first solution includes one or more algorithm traces (The algorithm traces in specification on paragraph [0014] is defined as values at intermediate points in the algorithm, and/or the final results obtained, which is termed the algorithm trace. Martin uses 'the value of intermediate comparison points at various times' in comparison with a reference model (first solution) in verification checking system in col. 2, lines 7-21 that meets the claimed limitation including the persistent caches which is defined in the abstract of application as an intermediate value for an equivalency check ).

**Regarding claim 2:** The prior art teaches a method with combinational circuits (col. 1, lines 31-43).

**Regarding claim 3:** The prior art teaches a method with sequential circuits (col. 5, lines 16-45 using state holding elements).

#### ***Allowable Subject Matter***

Claims 4-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reason for allowance is that the prior art of record does not teach the "first solution includes one or more problem signatures" with all other features of the independent claim.

#### ***Allowable Subject Matter***

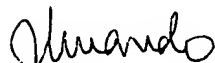
Claims 63-70 are allowed. The reason for allowance is that the prior art of record fails to teach the "problem signatures" with combination of all other features of the independent claim.

### **CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone numbers for proceeding this application is 571 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



Thuan Do  
Primary examiner  
12/05/2006